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The Director,
Resource Assessments,
Planning and Assessment,
DPIE,
Locked Bag 5022,
Parramatta,
NSW 2124

Dear Sir,

APPLICATION NAME: BOWDENS SILVER MINE AMENDMENT
APPLICATION NUMBER: SSD5765
LOW FREQUENCY NOISE

I **object** to this proposal (SSD 5765).

I declare that I **have not made any Donations or Gifts** to any political party or personnel in the last two years.

The subject of Low Frequency noise has not been addressed by Bowdens. All observations, limits etc are given in dB(A). Attached is a graph to demonstrate to you that the C scale is more relevant. dB(A) only becomes normal at 1000 cps whereas the C scale is about normal at most frequencies including low frequencies.

A jaw grinder, SAG mill etc of the fixed plant, dozers, rippers and haulpacks and drills and loaders all create noise and vibrations from powered steel workpieces impacting rock with greatest force man can design! They create low frequency noise at high sound pressures!

Bowdens don't want to report this so they use the A scale. The A scale is totally wrong for the purpose. The A scale is designed to replicate the human voice and hearing; a jaw crusher does not make human sounds! WHO published the following in 2000:

"When prominent low frequency components are present, noise measures based on A-weighting are inappropriate"
"Since A-weighting underestimates the sound pressure level of noise with low frequency components, a better assessment of health effects would be to use C-weighting"
"It should be noted that a large proportion of low frequency components in a noise may increase considerably the adverse effects on health"
"The evidence on low frequency noise is sufficiently strong to warrant immediate concern"

Furthermore, low frequency sounds are almost impossible to attenuate. They travel long distances through rock, concrete and brick walls insulation etc. Bowdens have not proposed anything but a tin shed which would be nearly useless to stop anything but the rain.

Bowdens at item 7.6 (ONMP) say:


'The real time noise monitors would be capable of recording continuous real time audio, sampling A-weighted and C-weighted noise levels and statistical 1/3 octave noise data to establish the extent of any low frequency noise content.'

This is the first and last time Bowdens mentions low frequency noise. The only time that they mention C-weighting noise. They know that there will be massive generation of high impact widely distributed low frequencies so they sweep it under the carpet by making all further reporting and modelling based on A-scale decibels.

To avoid sleep deprivation and other health effects WHO recommend no greater than 42 dB(C) inside a residence. Since 42 dB (C) includes low frequencies if it had been expressed as dB(A) it would be a much lower level (by 15dB(A) perhaps) required for compliance. This is an inconvenient truth being avoided by Bowdens.

Bowdens need to recalibrate their base data and modelling to account for low frequencies and to then prove that there are not sleep deprivation and potential human health problems. And if dB(C), dB(Z), or dB(lin) are not used to model Bowdens noise impacts DPIE should reject the entire project for it's lack of reliability and validity in the EIS.

Yours sincerely,

 9/8

R C Plummer